**Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**6th grade Math End of Course Exam Review**

**1) Place these numbers on the number line:** -1/2, -2, 4, -3, 1½, -1

**Solve the following fraction problems and put your answer in *simplest form*.**

2) 2 ÷ 3 3) 3 – 1 4) 4 x 5 5) 2 ½ + 5 ⅔

5 7 4 8 7 8

**Solve the following**

6) What number is 5 more than negative 2? 7) What number is 4 less than 2?

**Solve the following proportions**

8) 2 = m 9) 6 = 15 10) 5 : 7 = 10 : m

3 12 4 y

**Arrange the following in order from *least to greatest***

11) 135.1, .6510, 5.712, 1.342 12) 7.12, .7210, 17.021, .701

**Find “x” in the similar triangles below.**

13)

2

3

6

4

10

x

**Find “m” in the similar rectangles below.**

14)

8

5

m

10

**Solve the following integer problems**

15) 36 ÷ (- 4) 16) -9 – (- 6) 17) (8)(2)(- 2) 18) 6 + (- 8)

19) On Sunday the low temperature was -9°F. On Monday the low temperature rose 12°F. What was the low temperature on Monday?

20) You are in your submarine at 45 feet below sea level and you dive down another 57 feet. How many feet did you dive down all together?

**Solve the following *percent* problems.**

21) Mr. Velk has to write a 500 word essay. He has already written 235 words, what % of the essay did he write?

22) The shirt you want is $65 but it’s on sale for 35% off. Find the amount of the discount and the sales price.

23) You are taking your favorite math and science teacher to lunch and the bill came to $24. If you tip the waiter 12% of the bill (service wasn’t that good ☹), how much will the bill be?

**Solve the following ratio problems.**

24) Mr. Burns got 8 out of 12 correct on his test. Write this ratio as a fraction in simplest form.

25) Every month the cafeteria orders 120 gallons of milk and 220 gallons of chocolate milk. What is the ratio of milk to chocolate milk as a fraction in simplest form?

**Find the *Greatest Common Factor* numbers given.**

26) 28 and 35

27) 12 and 60

**Find the *Least Common Multiple* numbers given**

28) 4 and 10

29) 12 and 18

***Evaluate* the expression when x = 4, y = 6, z = 8**

30) (z + x) ÷ y

31) (z)(y) ÷ x

***Evaluate* the expressions.**

32) 12 + 3² ÷ 3 - 6

33) 24 – 3 x 6 + 8

**Use the *distributive* property to rewrite the expression, simplify if possible.**

34) 7(h – 8)

35) m(3 + 4)

**Find the *rate per unit* for the following situations.**

36) You type 500 words in 250 minutes; find the number of words per minute you type.

37) The bus holds 32 students and there are 192 students to use the bus, find the number of students per bus.

**Find the *circumference* of each circle.**

38) Diameter = 10cm

39) Radius = 6 inches

**Find the *area* of each circle**

40) Radius = 5 meters

41) Diameter = 12 miles

**Find the *volume* of the following prisms**

42) Length 7 inches, Width 6 inches, Height 5 inches of a rectangular prism

43) A cylinder has a radius of 4 meters and a height of 8 meters

**Find the missing *angle measurement***

44) Angle A and angle B are supplementary angles, if angle B equals 73°, what is the measurement of angle A?

45) What is the sum of two angles that are complementary?

46) In a triangle one angle measures 56° and another measures 32°, what is the measure of the third angle?

47) Explain why a random sample is a good technique for gathering data.

**Determine how many possible outcomes there can be for each situation**

48) Jacob is trying to figure out what to wear to school. He has 5 shirts, 3 pairs of pants and 2 pairs of socks to choose from. How many outfits can he make?

49) Christian is making a sandwich and he has 4 different types of meat, 3 kinds of bread, 2 types of mustard and 3 kinds of cheese. How many sandwich combinations can he make?

**Write down the *formulas* for the following problems.**

50) Area of a circle 51) Volume of a rectangular prism 52) Area of a rectangle

**Find the *probability* of the following situations**

53) You spin a spinner that has the numbers 1-5 on it. What is the probability that you spin a 3?

54) On the same spinner as #53, what is the probability of spinning an even number?

55) Using the same spinner as #53, what is the probability of not spinning a 2?

56) You roll two number cubes, what is the probability of rolling two 5’s?

**Use the following information to solve problems #57-60**

A garden is being built in your front yard. It will have a length of 14 feet, a width of 10 feet and a height of 2 feet.

57) What will the perimeter be of your garden?

58) What is the area of your garden?

59) What is the volume of the garden?

60) If a 4 foot by 8 foot section of your garden is filled with tomatoes, how much area is left to plant other vegetables?

61) If you built the same size garden in your back yard, how much total area will you have with both gardens?